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PATENT

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Trudi Thompson
Trudi Thompson

Applicant : Gregory G. Spanjers, et al. Confirmation No. 6147
Application No. : 10/701,030
Filed : November 3, 2003
Title : DUAL-MODE CHEMICAL-ELECTRIC THRUSTERS FOR SPACECRAFT

Grp./Div. : 3746
Examiner : Unassigned

Docket No. : 51438/DJB/W382

**INFORMATION DISCLOSURE STATEMENT
37 CFR § 1.97(b)**

Mail Stop Amendment
Commissioner for Patents
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February 3, 2005

Commissioner:

In compliance with the duty of disclosure under 37 CFR §§ 1.56, 1.97 and 1.98, and in accordance with the provisions in the Manual of Patent Examining Procedure §§ 609 and 707.05(b), enclosed is FORM PTO/SB/08A/B listing the references that are known to applicant. Copies of each of the references listed under "Other Documents" are enclosed. This filing is timely because it is made during one of the periods described in 37 CFR § 1.97(b).

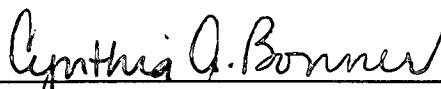
It is respectfully requested that the listed references be considered in the examination of this application and identified on the list of references cited on the patent issuing for this application. Applicant also requests that an initialed copy of FORM PTO/SB/08A/B be entered

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /T.C./

Application No. 10/701,030

in the application file and returned to applicant with the next communication from the Office in accordance with MPEP § 609.

Respectfully submitted,
CHRISTIE, PARKER & HALE, LLP

By 
Cynthia A. Bonner
Reg. No. 44,548
626/795-9900

DJB/tt

Enclosures: PTO/SB/08A/B, w/references

TXT IRV1083378.1-*02/3/05 9:35 AM

FORM PTO SB/08A/B (10-01) Substitute for PTO-1449A/B INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)	Attorney Docket Number	51438/DJB/W382
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EXAMINER INITIALS	Cite No. ¹	DOCUMENT NUMBER Number - Kind Code ² (If Known)	PUBLICATION DATE MM-DD-YYYY	NAME OF PATENTEE
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		5,924,278	07-20-1999	Burton et al.
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FOREIGN PATENT DOCUMENTS

EXAMINER INITIALS	Cite No. ¹	Foreign Patent Document Country Code ³ - Number ⁴ - Kind Code ⁵ (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T ⁶ (✓)

OTHER DOCUMENTS

EXAMINER INITIALS	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article, title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		ALTMAN et al., "Chapter 7: Hybrid Rocket Propulsion Systems," Published in Space Technology Series: Space Propulsion Analysis and Design, McGraw-Hill, 1995, pp. 365-441, Cover pgs (2)
		ASHBY et al., "Quasi-Steady-State Pulsed Plasma Thrusters," AIAA Journal, Vol. 4, No. 5, May 1966, pp. 831-835
		ASTON et al., "Ignitor Plug Operation In A Pulsed Plasma Thruster," Journal of Spacecraft, Vol. 19, No. 3, May-June 1982, pp. 250-256
		BARBER et al., "Microthrusters Employing Catalytically Reacted N ₂ -O ₂ -H ₂ Gas Mixtures, Tridyne," Journal of Spacecraft, Vol. 8, No. 2, February 1971, pp. 111-116
		BARTOLI et al., "A Liquid Caesium Field Ion Source For Space Propulsion," J. Phys. D: Applied Phys., Vol. 17, 1984, pp. 2473-2483
		BASSNER et al., "The Design of RITA Electric Propulsion System for Sat 2 (Artemis)," AIAA/DGLR/JSASS 21st International Electric Propulsion Conference, July 18-20, 1990, AIAA Paper No. 90-2539, pp. 1-7, Cover pg. (1)

EXAMINER SIGNATURE		DATE CONSIDERED	
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.pto.gov or MPEP 901.4. ³Enter Office that issued the document, by the two-letter code (WIPO standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English Language Translation is attached.

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		BAYT et al., "A Performance Evaluation Of MEMS-Based Micronozzles," 33rd AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, July 7-9, 1997, AIAA Paper No. 97-3169, pp. 1-10, Cover pg. (1)
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		CRADDOCK et al., "Design And Development Of The Army KE ASAT ACS Thruster," AIAA/SAE/ASME/ASEE 29th Joint Propulsion Conference and Exhibit, June 28-30, 1993, AIAA Paper No. 93-1959, 6 pgs., Cover pg. (1)

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		GUMAN et al., "Exhaust Plume Studies Of A Pulsed Plasma Thruster," AIAA/DGLR 13th International Electric Propulsion Conference, April 25-27, 1978, AIAA Paper No. 78-704, pp. 1-8, Cover pg. (1)

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		GUMAN et al., "Pulsed Plasma Microthruster For Synchronous Meteorological Satellite (SMS)," AIAA 10th Electric Propulsion Conference, October 31-November 2, 1973, AIAA Paper No. 73-1066, pp. 1-9, Cover pg. (1)
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		JONES, R., "Electromagnetically Launched Micro Spacecraft For Space Science Missions," AIAA Aerospace Sciences Conference, January 11, 1988, AIAA Paper No. 88-0068, pp. 1-9, Cover pg. (1)
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		MARCUCCIO et al., "Flight Demonstration Of FEEP On Get Away Special," 34th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, July 13-15, 1998, AIAA Paper No. 98-3332, pp. 1-11, Cover pg. (1)
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		MITTERAUER, J., "Miniaturized Liquid Metal Ion Sources (MILMIS)," IEEE Transactions on Plasma Science, Vol. 19, No. 5, October 1991, pp. 790-799
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	Application Number	10/701,030
	Filing Date	November 3, 2003
	Applicant(s)	Gregory G. Spanjers, et al.
	Group Art Unit	3746
	Examiner Name	Unassigned

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